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CERTIFICATE

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I, Manabu Shimatani, of 18-2-305, Sakuragaoka 1-chome, Setagaya-ku, Tokyo, 156-0054, Japan hereby declare that I am the translator of the documents attached and certify that the following is to the best of my knowledge and belief a true and correct translation.

Signed this 30th day of August, 2006

M. Shimatani

Manabu Shimatani
Patent Attorney

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【Inventor】

【Address】 c/o Fuji Photo Film Co., Ltd.
11-46, Senzui 3-chome, Asaka-shi, Saitama, Japan

【Name】 Koki Okamura

【Patent Applicant】

【Identification Number】 000005201

【Name】 Fuji Photo Film Co., Ltd.

【Agent】

【Identification Number】 100083116

【Patent Attorney】

【Name】 Kenzo Matsuura

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【List of Enclosures】

【Enclosure】 Specification 1

【Enclosure】 Drawings 1

【Enclosure】 Abstract of the Disclosure 1

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【Need for Proof】 Required

【Document Name】 Specification

【Title of the Invention】 File Transfer Program

【Scope of the Patent Claims】

【Claim 1】

A file transfer program which makes a computer achieve:

a function, when a file stored in a first folder is selected to be stored into a second folder, to attach a filename to the selected file and store the selected file into the second folder;

a function to compare a filename of the selected file with a filename of each file already stored in the second folder; and

a function, if the second folder contains a file having a filename same as the selected file, to display thumbnail images and file information of the selected file and the file having the same filename in the second folder together on a display device.

【Claim 2】

The file transfer program as defined in claim 1, which makes the computer further achieve:

a function, if at least one of the selected file and the file having the same filename is a movie file, to display a first frame of the movie as the thumbnail image thereof on the display device; and

a function to play back the movie upon operation to the thumbnail image.

【Claim 3】

A file transfer program which makes a computer achieve:

a function, when an audio file stored in a first folder is selected to be stored into a second folder, to attach a filename to the selected file and store the selected file into the second folder;

a function to display an icon image on a display device, the icon image indicating that the file is audio, for the selected file and an audio file stored in the second folder; and

a function to play back the audio upon operation to the icon image.

【Detailed Description of the Invention】

【0001】

【Field of the Invention】

The present invention relates to a file transfer program, and more particularly to a file transfer program that improves operability of file transfer in processing of multimedia files with a personal computer.

【0002】

【Prior Art】

In processing of multimedia files with a personal computer, when a file stored in a folder is selected to be stored into another folder, it is generally performed to attach a filename to the selected file and to store it into the other folder when instructed.

【0003】

Moreover, by the spread of digital cameras, users can easily create digital image data. Generally, image data captured with a digital camera are copied to a mass storage device, such as a hard disk of a personal computer, to be accumulated and stored. Also in this case, operations to transfer image data files are necessary. For this type of technology, various proposals are disclosed (refer to Patent Document 1 for example).

【0004】

【Patent Document 1】

Japanese Patent Application Publication No. 11-234615

【0005】

【Problem to be Solved by the Invention】

However, in the above-described conventional file transfer method, problems to be explained below may easily occur in overwrite of a file or other processings. Specifically, when a file stored in a first folder is selected to be saved in a second folder, it is generally performed to name the file the same filename after the selected file, and store the file into the second folder. At this time, if the second folder already contains another file that has the same filename as the selected file, the user may not be able to quickly decide whether the two

files should exist independently in the second folder, overwrite of the selected file onto the file in the second folder should be performed, or save processing should be halted.

【0006】

At that moment, if contents of the file that has the same filename and already exists in the second folder are different from those of the file to be newly saved, a filename of the file to be newly saved should be made different from the filename of the file that already exists in the second folder. On the other hand, if the file that has the same filename and already exists in the second folder is an old version of the file to be newly saved, the new file should overwrite the old file in the second folder.

【0007】

However, contents of individual file cannot generally be understood at a glance in a display screen of file transfer.

【0008】

To solve such a problem, a system has been proposed in which the identity of a file is determined according to a code peculiar to the file in file transfer, so as to decide transfer or skip (refer to Patent Document 1). However, a file with a peculiar code is one that is specially formatted, and ordinary files are not attached with peculiar codes, so that the use of this system is limited.

【0009】

The present invention has been developed in view of the above-described circumstances, and has as its object the provision of a file transfer program that allows users to easily decide at a glance whether or not a file should overwrite and improves operability of file transfer in processing of multimedia files with personal computers or other devices.

【0010】

【Means for Solving Problem】

In order to attain the above-described object, the present invention provides a file

transfer program which makes a computer achieve: a function, when a file stored in a first folder is selected to be stored into a second folder, to attach a filename to the selected file and store the selected file into the second folder; a function to compare a filename of the selected file with a filename of each file already stored in the second folder; and a function, if the second folder contains a file having a filename same as the selected file, to display thumbnail images and file information of the selected file and the file having the same filename in the second folder together on a display device.

【0011】

According to the present invention, if there is a file, in the second folder, having the same filename as a selected file, thumbnail images and file information of the selected file and the file having the same filename in the second folder are displayed together on a display device. Subsequently, decision whether or not to overwrite the file is prompted.

【0012】

For example, in the case of a still image file, the still image in the folder is reduced and then displayed as its thumbnail image. Therefore, by comparing both of the thumbnail images, decision whether or not to overwrite the file can be executed at a glance and operability of file transfer is improved.

【0013】

In the above description, "a filename attached to a file" means a filename with extension (e.g., "DSCF0001.JPG").

【0014】

In the present invention, preferably, the file transfer program makes the computer further achieve: a function, if at least one of the selected file and the file having the same filename in the second folder is a movie file, to display a first frame of the movie as the thumbnail image thereof on the display device, and to play back the movie upon operation to the thumbnail image.

【0015】

This is because, in displaying thumbnail images and file information of two or more files together, if the first frame of a movie is displayed, contents of the file can be determined at a glance and operability of file transfer is improved. Furthermore, by operating a thumbnail image (e.g., click operation), a movie is played back, so that contents of the file become clearer and operability of file transfer is improved.

【0016】

Moreover, the present invention also provides a file transfer program which makes a computer achieve: a function, when an audio file stored in a first folder is selected to be stored into a second folder, to attach a filename to the selected file and store the selected file into the second folder; a function to display an icon image on a display device, the icon image indicating that the file is audio, for the selected file and an audio file stored in the second folder; and a function to play back the audio upon operation to the icon image.

【0017】

According to the present invention, even for audio files, the contents of which cannot easily be determined visually, icon images that indicate they are audio files are displayed. By operating the icon images (e.g., click operation), audio is played back. Thereby, decision whether or not to overwrite a file can easily be executed, and operability of file transfer is improved.

【0018】

【Preferred Embodiment of the Invention】

Hereafter, preferred embodiments of a file transfer program according to the present invention will be explained in details with reference to the attached drawings. Fig. 1 is a block diagram showing an example of hardware structure of a personal computer having a file transfer program according to an embodiment of the present invention.

【0019】

As shown in Fig. 1, the personal computer mainly comprises: a central processing

unit (CPU) 10, which mainly controls operations of each structure element; a main memory 12, which is used for storage of control programs of the apparatus and becomes a work area when the programs are executed; a hard disk device 14, in which an operating system (OS) of the personal computer, an album preparation program according to the embodiment of the present invention, various kinds of application software, user's images, and other data are stored; a CD-R/RW device 16, which can read from CD-ROM or, read from and write to CD-R; a display memory 18, which temporarily stores display data; a monitor device 20, such as a CRT monitor or an LCD monitor, which displays images and/or characters according to image and/or character data stored in the display memory 18; a keyboard 22; a mouse 24 as a position input device; a mouse controller 26, which detects states of the mouse 24 and outputs signals of a position of the mouse pointer on the monitor device 20 and/or states of the mouse 24 to the CPU 10; and a bus 28, which connects the above-described structure elements with each other.

【0020】

The personal computer, which has the above-described structure, has already been known except for the file transfer program stored in the hard disk device 14, so that detail description of each structure element is omitted.

【0021】

Next, an outline of the file transfer program according to the embodiment of the present invention will be explained. When a user designates a folder on the hard disk device 14, in which image files and any other data are stored in a lower layer, the file transfer program operates the personal computer to restructure data stored in all layers lower than the folder into a format, such as a CD album format that is suitable for recording into a CD-R, and writes the data onto other areas in the hard disk device 14 and/or the CD-R. Hereinafter, an example will be explained, in which N files stored in a recording medium of a digital camera are transferred to the hard disk device 14 of the personal computer.

【0022】

An outline flow of the file transfer program according to the embodiment of the present invention will be explained in accordance with a flow chart shown in Fig. 2. When

the personal computer is started and a viewer software is activated, a folder in the hard disk device 14 is designated (in this example, 100_FUJI), and an image list of image files stored in the folder is displayed on the monitor device 20 as shown in Fig. 3, in which two still image files of DSCF0001.JPG and DSCF0002.JPG, and one movie file of DSCF0003.AVI are displayed as thumbnail images (hereabove is step S0 in the state "start").

【0023】

Next, a file to be transferred is selected on the screen shown in Fig. 3 (step S2). Usually, this operation is performed with the mouse 24, and a pointer is placed on the thumbnail image of the file to be selected and then the mouse 24 is right-clicked.

【0024】

In usual viewer software, a popup menu screen (not shown) is then displayed. In the popup menu screen, a transfer command is selected and then clicked (step S4). Thereby, a window screen to designate a target folder to which the file is transferred is displayed on the monitor device 20 as shown in Fig. 4, and selection of the target folder is prompted (step S6). According to this, the target folder is selected. Usually, this operation is performed with the mouse 24, and a file to be selected is designated by a pointer and then "copy" switch is clicked.

【0025】

After that, a counter in the program is set so that N = 1 (step S8), and then it is determined whether or not the target folder to which the file is transferred contains a file having a filename that is the same as the filename of the Nth (in this state, N is 1) file to be transferred (step S10). If the target folder contains no file having the same filename as the Nth file (NO), the Nth file is stored into the target folder (step S12) and then the processing proceeds to step S20.

【0026】

On the other hand, if the target folder contains a file having the same filename as the Nth file (YES) at step S10, thumbnail images of the file in the source of transfer and the file in

the target folder that have the same filename, are displayed together on the monitor device (step S14) as shown in Fig. 5, and a message is displayed to show that the target folder to which the file is transferred contains the file having the same filename as the Nth file and to ask whether or not overwrite should be performed. Moreover, file information is also displayed on the side of each thumbnail image.

【0027】

In Fig. 5, the example is shown in which both of the file in the source of transfer and the file in the target folder that have the same filename are still image files. In the case where either one or both file(s) having the same filename is (are) a movie file(s), the first frame of the movie is displayed as its thumbnail image. Moreover, the movie can be played back upon operation (e.g., click operation) to the thumbnail image. With such a structure, contents of the file can be determined at a glance. Therefore, contents of the file become clearer by the above-described operation of the thumbnail image to play back the movie.

【0028】

On the other hand, in the case shown in Fig. 5 where either one of the file(s) having the same filename is (are) an audio file(s), an icon image shown in Fig. 6, which indicates that the file is audio, is displayed on the monitor device. With such a structure, even for an audio file that it is hard to visually determine contents of the file, it becomes clear that the file is an audio file. Moreover, the audio can be played back upon operation to the icon image, so that contents of the file become clearer.

【0029】

The icon image shown in Fig. 6 shows the outline of a microphone; however, any form other than this can also be adopted.

【0030】

Then, decision whether or not to overwrite the file, based on the acquired information at step S14, is prompted (step S16). If overwrite of file is not necessary (NO), the processing proceeds to step S20.

【0031】

On the other hand, if overwrite of file is necessary (YES), the file in the source of transfer overwrites the file having the same filename in the target folder to which the file is transferred (step S18).

【0032】

At the next step S20, the flows from steps S12, S16 and S18 are joined. At this step S20, whether or not transfer of all N files to be transferred is completed is determined. If the transfer of the all files is completed (YES), the program ends (step S999).

【0033】

On the other hand, if the transfer of the all files is not completed (NO), the counter in the program is incremented, that is, N = N+1 (step S22), and the processing is returned to step S10. Subsequently, the same loop is repeated, and after all N files to be transferred are transferred at step S20 (YES), the program ends (step S999).

【0034】

In the above, embodiments of the file transfer program according to the present invention are explained; however, the present invention is not restricted to the above-described embodiments and various embodiments can be adopted.

【0035】

In the above embodiments, a personal computer is adopted as an example of hardware structure. Alternatively, a digital camera, for example, is similarly applicable as a hardware structure.

【0036】

Further, display screens and thumbnail images in the above embodiments are examples, and other various forms can be adopted.

【0037】

【Effect of the Invention】

As described above, according to claim 1 of the present invention, if there is a file, in the second folder, having the same filename as a file selected to be transferred into the target folder, thumbnail images and file information of the selected file and the file having the same filename are displayed together on a display device. Subsequently, decision whether or not to overwrite the file is prompted.

【0038】

In the case of a still image file, the still image in the folder is reduced and displayed as its thumbnail image. Thereby, by comparing both thumbnail images, decision whether or not to overwrite the file is performed at a glance, and operability of file transfer is improved.

【0039】

According to claim 3 of the present invention, even in the case of an audio file, the contents of which cannot be visually determined, an icon image that indicates an audio file is displayed. By operating the icon image (e.g., click operation), audio is played back. Thereby, decision whether or not to overwrite the file is easily performed, and operability of file transfer is improved.

【Brief Description of the Drawings】

【Fig. 1】

a block diagram showing an example of hardware structure of a personal computer having a file transfer program according to the present invention

【Fig. 2】

a flowchart of the file transfer program according to the present invention

【Fig. 3】

a drawing showing a state of a screen on a monitor device in which an image list of image files is displayed

【Fig. 4】

a drawing showing a state of a screen on the monitor device in which a window

screen to designate a target folder to which a file is transferred is displayed

【Fig. 5】

a drawing showing a state of a screen on the display device in which thumbnail images of a file in the source of transfer and a file in the target folder that have the same filename are displayed

【Fig. 6】

a drawing showing a state of an example of icon image indicating an audio file

【Description of the Reference Numbers】

10... central processing unit (CPU); 12... main memory; 14... hard disk device; 16... CD-R/RW device; 20... monitor device; 22... keyboard; 24... mouse

【Document Name】 Abstract

【Abstract】

【Assignment】

Provision of a file transfer program in which decision whether or not to overwrite a file is performed at a glance, and operability of file transfer is improved.

【Means for Solution】

The file transfer program makes a computer achieve a function, when a file stored in a first folder is selected to be stored into a second folder, to attach a filename to the selected file and store the selected file into the second folder. The program further makes the personal computer achieve a function to compare a filename of the selected file with a filename of each file already stored in the second folder, and a function, if the second folder contains a file having a filename same as the selected file, to display thumbnail images and file information of the selected file and the file having the same filename together on a display device.

【Selected Drawing】 Fig. 5

FIG.1

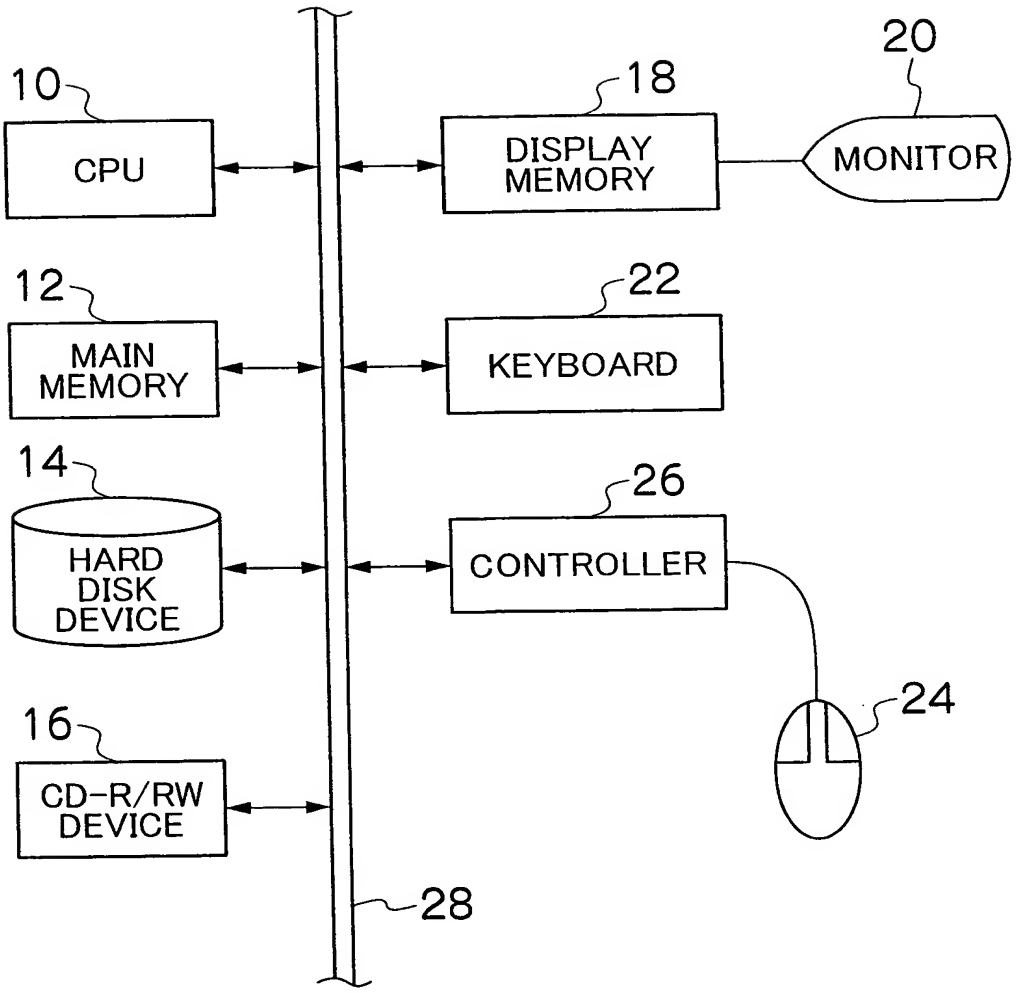

FIG.2

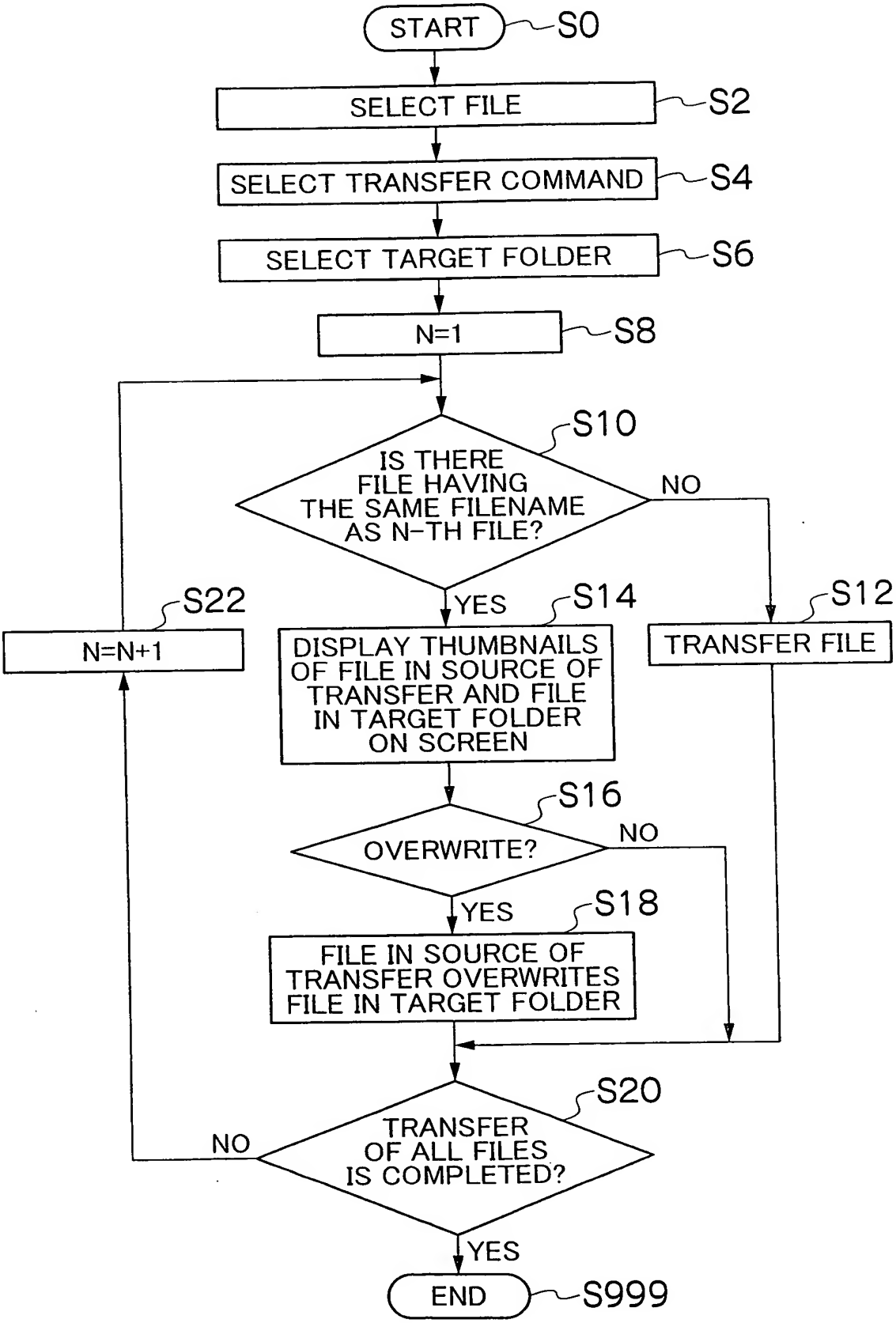
START
S0
SELECT FILE
S2
SELECT TRANSFER COMMAND
S4
SELECT TARGET FOLDER
S6
N=1
S8
S10
IS THERE FILE HAVING THE SAME FILENAME AS N-TH FILE?
NO
YES
S12
TRANSFER FILE
S14
DISPLAY THUMBNAILS OF FILE IN SOURCE OF TRANSFER AND FILE IN TARGET FOLDER ON SCREEN
S16
OVERWRITE?
NO
YES
S18
FILE IN SOURCE OF TRANSFER OVERWRITES FILE IN TARGET FOLDER
S20
TRANSFER OF ALL FILES IS COMPLETED?
NO
YES
S22
N=N+1
END
S999

FIG.3

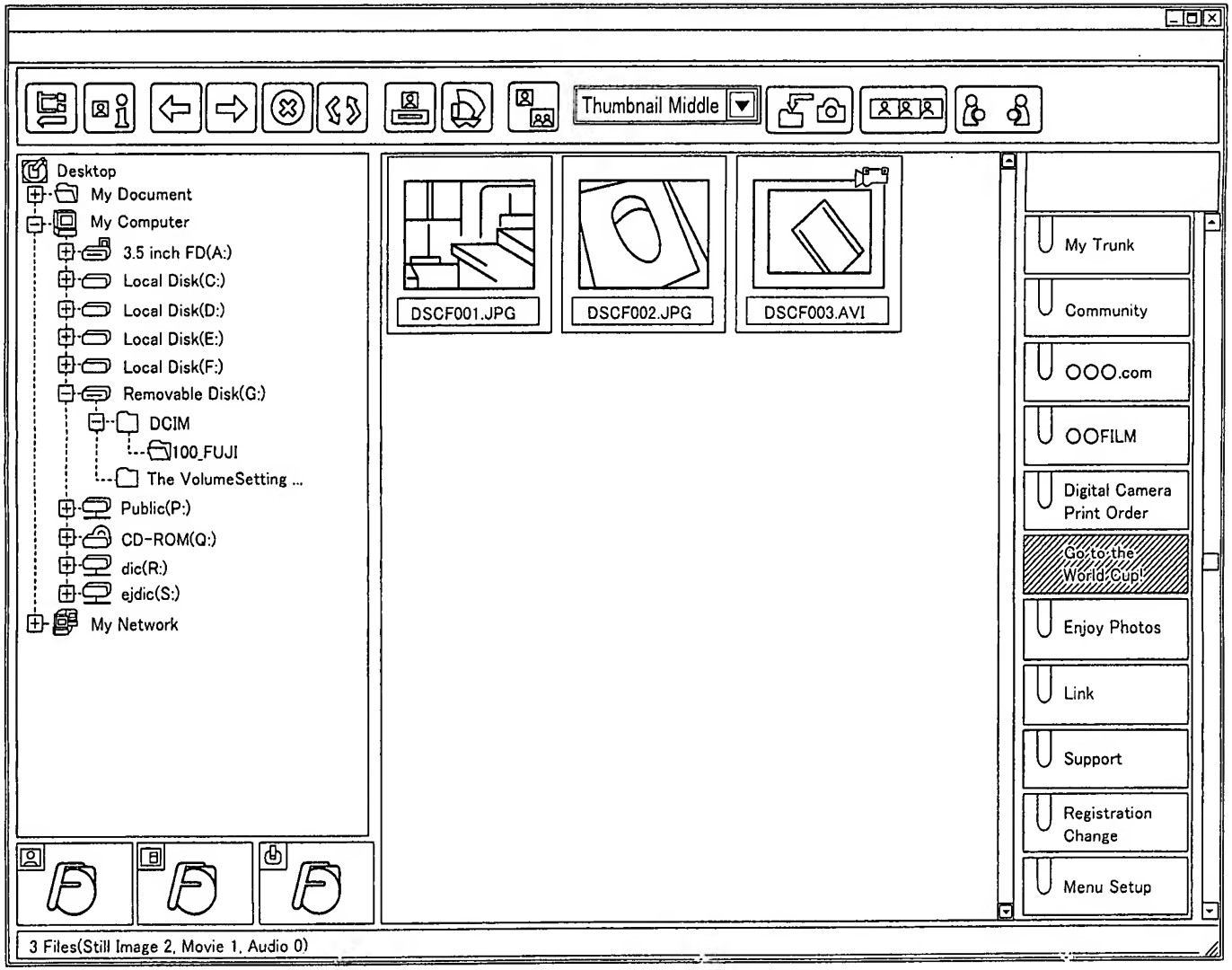
Thumbnail Middle
Desktop
My Document
My Computer
3.5 inch FD(A:)
Local Disk(C:)
Local Disk(D:)
Local Disk(E:)
Local Disk(F:)
Removable Disk(G:)
DCIM
100_FUJI
The VolumeSetting ...
Public(P:)
CD-ROM(Q:)
dic(R:)
ejdic(S:)
My Network
DSCF001.JPG
DSCF002.JPG
DSCF003.AVI
My Trunk
Community
OOO.com
OOFILM
Digital Camera Print Order
Go to the World Cup!
Enjoy Photos
Link
Support
Registration Change
Menu Setup
3 Files(Still Image 2, Movie 1, Audio 0)

FIG.4

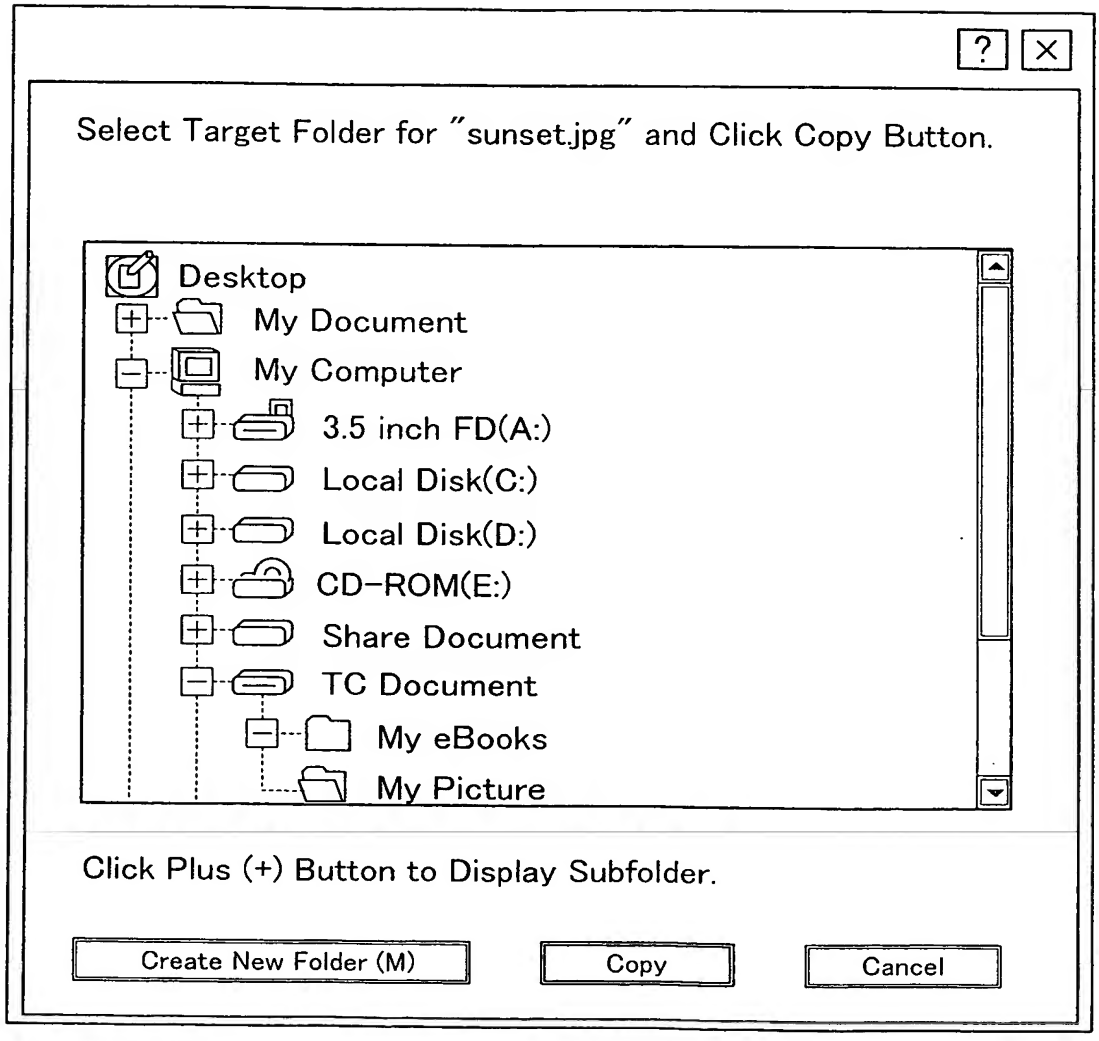
Select Target Folder for "sunset.jpg" and Click Copy Button.
Desktop
My Document
My Computer
3.5 inch FD(A:)
Local Disk(C:)
Local Disk(D:)
CD-ROM(E:)
Share Document
TC Document
My eBooks
My Picture
Click Plus (+) Button to Display Subfolder.
Create New Folder (M)
Copy
Cancel

FIG.5

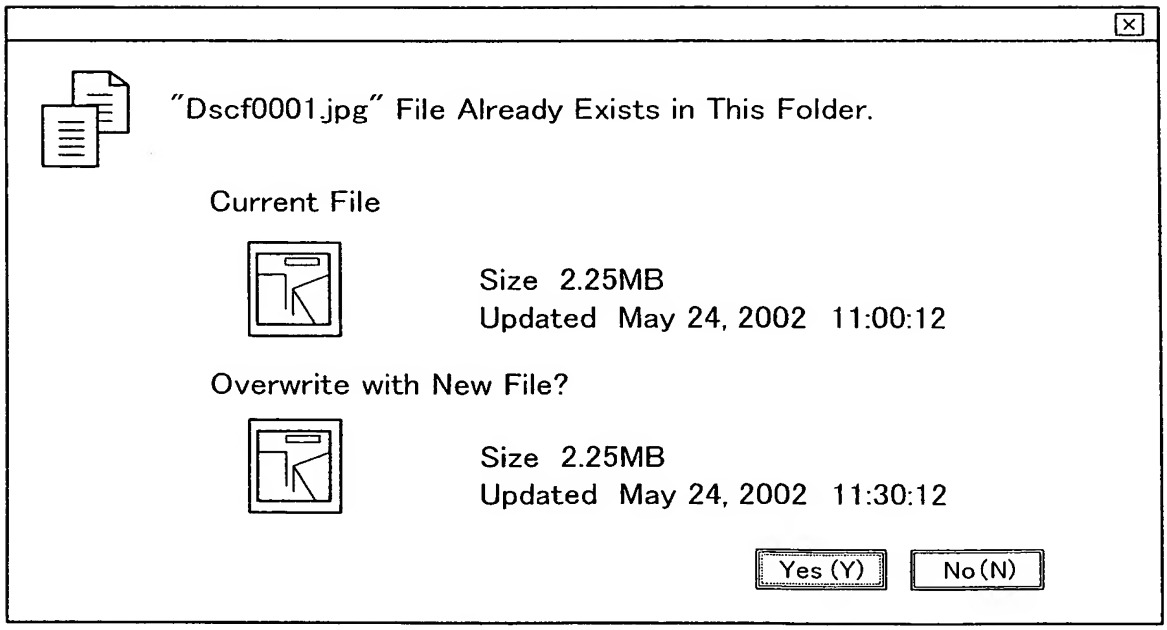
"Dscf0001.jpg" File Already Exists in This Folder.
Current File
Size 2.25MB
Updated May 24, 2002 11:00:12
Overwrite with New File?
Size 2.25MB
Updated May 24, 2002 11:30:12
Yes (Y)
No (N)

FIG.6